

psde

$$\#2.a) \quad PV = \frac{750 \left[1 - \left(1 + \frac{0.08}{1} \right)^{-3} \right]}{0.08/1}$$

$$= 1932.82$$

$$b) \quad PV = \frac{450 \left[1 - \left(1 + \frac{0.075}{4} \right)^{-34} \right]}{0.075/4}$$

$$= 11238.20$$

$$c) \quad PV = \frac{225 \left[1 - \left(1 + \frac{0.0325}{12} \right)^{-60} \right]}{0.0325/12}$$

$$= 12444.69$$

$$\#5 \quad PV = \frac{750 \left[1 - \left(1 + \frac{0.04}{1} \right)^{-3} \right]}{0.04}$$

$$= 2081.32$$

$$\#6 \quad 4000 = \frac{R \left[1 - \left(1 + \frac{0.052}{12} \right)^{-48} \right]}{0.052/12}$$

$$\frac{4000 \times \frac{0.052}{12}}{\left[1 - \left(1 + \frac{0.052}{12} \right)^{-48} \right]} = \frac{R \left[1 - \left(1 + \frac{0.052}{12} \right)^{-48} \right]}{\left[1 - \left(1 + \frac{0.052}{12} \right)^{-48} \right]}$$

$$R = 92.48$$

$$\#7.a) \quad 125000 = \frac{R \left[1 - \left(1 + \frac{0.065}{4} \right)^{-100} \right]}{0.065/4}$$

$$\frac{125000 \times \frac{0.065}{4}}{0.80049943} = \frac{R \left[0.80049943 \right]}{0.80049943}$$

$$R = 2537.48$$

$$b) \quad 2537.48 \times 4 = 10149.92$$

$$10149.92 \times 25 = 253748$$

$$= 253748 - 125000$$

$$= 128748$$

$$\begin{aligned}\#8. \quad PV &= \frac{35 \left(1 - \left(1 + \frac{0.16}{12}\right)^{-18}\right)}{0.16/12} \\ &= 556.82 + 150 \text{ (down payment)} \\ &= 706.82\end{aligned}$$

$$\#11. \quad 22000 = \frac{R \left(1 - \left(1 + \frac{0.024}{12}\right)^{-60}\right)}{0.024/12}$$

$$\frac{44}{(0.112973268)} = \frac{R (0.112973268)}{(0.112973268)}$$

$$R = 389.47$$

a) Shimons monthly payments are \$389.47

$$b) \quad 389.47 \times 12 \times 5$$

$$23368.20$$

∴ the total cost for the dealer finance plan is \$23368.20

$$c) \quad 20000 = \frac{R \left(1 - \left(1 + \frac{0.06}{12}\right)^{-60}\right)}{0.06/12}$$

$$\frac{20000 \times \frac{0.06}{12}}{0.258627803} = \frac{R (0.258627803)}{0.258627803}$$

$$R = 386.66$$

∴ Shimion should choose the bank since the payments are cheaper \$386.66.

$$\#12a) = \frac{55 \left(1 - \left(1 + \frac{0.05}{12} \right)^{-18} \right)}{0.15/12}$$

$$= 881.63 + \$80 \text{ down payment}$$

$$= 961.63$$

∴ the selling price of the computer system is \$961.63

$$b) = 55 \times 18$$

$$= 990 + 80$$

$$= 1070$$

$$= 1070 - 961.63$$

$$= 108.37$$

∴ the finance charge is \$108.37

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$$17000 = \frac{325 \left(1 - \left(1 + \frac{0.072}{12} \right)^{-n} \right)}{0.072/12}$$

$$17000 \times \frac{0.072}{12} = 325 \left(1 - \left(1 + \frac{0.072}{12} \right)^{-n} \right)$$

$$\frac{102}{325} = \frac{325 \left(1 - \left(1 + \frac{0.072}{12} \right)^{-n} \right)}{325}$$

$$0.313846153 = 1 - \left(1 + \frac{0.072}{12} \right)^{-n}$$

$$(1.006)^{-n} = 1 - 0.313846153$$

$$\frac{1}{(1.006)^n} = 0.686153847$$

$$\frac{1}{0.686153847} = \frac{0.686153847 (1.006)^n}{0.686153847}$$

$$(1.006)^n = \frac{1}{0.686153847}$$

$$(1.006)^n = 1.457399101$$

$$n = \frac{\log 1.457399101}{\log 1.006}$$

$$n = 62.96$$

divide out compounding period

$$= 62.96 \div 12$$

$$= 5.25$$

$$0.25 \times 12$$

$$= 3$$

∴ it will take Kyla

5 years & 3 months to pay back the loan.